

Remarks

The Advisory Actions mailed June 10, 2005 and May 16, 2005, and the Office Action mailed March 07, 2005, have been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-21 are now pending in this application, of which claims 1, 11, 16, 19 and 20 have been amended. It is respectfully submitted that the pending claims define allowable subject matter.

The amendment filed June 01, 2005 in response to the Final Office Action dated March 07, 2005 was not entered as the proposed amendments were not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal. As such, and in light of the Advisory Office Action dated June 10, 2005, Applicants submit the foregoing amendment in an attempt to place the application in condition for allowance.

The rejection of claims 1-9, 11-14, and 16-21 under 35 U.S.C. § 102(b) as being anticipated by Lin et al. et al. (U.S. Patent 5,451,158) is respectfully traversed.

Lin et al. describe a connector (20) having an alignment flange (48) configured to be coupled to and extending rearward from and substantially perpendicular to a rear vertical face (34) of a rear region (26). The alignment flange (48) defines a plurality of vertical alignment channels (50) extending downward from a top surface (52) of the flange (48). The channels (50) are dimensioned to receive and align a tail portion (38 and 38') of the pin contacts (32 and 32'). Accordingly, when the pre-formed pin contacts (32 and 32') are positioned in corresponding apertures (28 and 30) of the connector (20), the respective tail portions (38 and 38') are precisely aligned to engage printed circuit contacts (14). *See* Lin et al. at Col. 5, lines 13-31.

Furthermore, Lin et al. describe an alignment spacer (54) including a bottom surface (56) having a plurality of downwardly extending alignment ribs (58) positioned and dimensioned to insert into respective alignment channels (50). The respective alignment ribs (58) extend into the respective alignment channels (50) until the respective distal end portions abut the respective tail

portions (38 and 38'). This wedges the respective tail portions (38 and 38') between the base of the respective channels (50) and the respective distal ends of the alignment ribs (58), urging the respective surface contact sections (44 and 44') against the corresponding circuit contacts (14). *See* Lin et al. at Col. 5, lines 32-51.

Claim 1 recites a header assembly including “an insulative housing comprising a plurality of walls defining an interior cavity” and “a plurality of contacts within said cavity and extending through one of said walls to an exterior of said housing for surface mounting to a circuit board, wherein said insulating housing comprises at least one alignment rib extending on an exterior surface thereof, said contacts formed against said alignment rib and abutting said alignment rib, wherein when said contacts abut said alignment rib, said contacts are positioned between said alignment rib and a mounting surface of the circuit board, and said contacts are biased to ensure coplanarity of said contacts for surface mounting to the circuit board.”

Lin et al. neither describe nor suggest an insulating housing having an alignment rib, such that when the contacts abut the alignment rib, the contacts are positioned between the alignment rib and a mounting surface of the circuit board as recited in claim 1. Rather, in contrast to the present invention, Lin et al. describe a connector having a plurality of preformed contacts inserted into vertical alignment channels of an alignment flange, the contacts extend along a vertical surface of the connector and then extend away from the connector along a circuit board. The contacts are not positioned between the circuit board and any portion of the connector.

Moreover, Lin et al. neither describe nor suggest an insulating housing having an alignment rib, such that when the contacts abut the alignment rib, the contacts are biased to ensure coplanarity of the contacts for surface mounting to the circuit board as recited in claim 1. Rather, in contrast to the present invention, Lin et al. describe a connector having a plurality of preformed contacts inserted into vertical alignment channels of an alignment flange. Contrary to the assertions otherwise in the Final Office Action dated March 07, 2005, and in the Advisory Action dated June 10, 2005 at paragraph 11, Lin et al. do not describe or even suggest that the contacts have an internal biasing force when the contacts abut the alignment flange, thereby ensuring coplanarity of the contacts for surface mounting. Moreover, the connector described by

Lin et al. requires an alignment spacer having a plurality of downwardly extending alignment ribs to be positioned into the alignment channels to abut the contacts and wedge the contacts between the base of the channels and the alignment ribs, thus urging the surface contact sections of the contacts against the corresponding circuit contacts of the PCB. Thus, to the extent that the Lin et al. contacts are flexed or biased, they are flexed or biased by the alignment spacer and not the flange.

Accordingly, for at least the reasons set forth above, claim 1 is submitted to be patentable over Lin et al.

Claims 2-9 depend from independent claim 1. When the recitations of claims 2-9 are considered in combination with the recitations of claim 1, Applicants submit that dependent claims 2-9 likewise are patentable over Lin et al.

Claim 11 recites a header assembly including “an insulative housing comprising a plurality of walls defining an interior cavity and a contact interface, and at least one alignment rib extending proximate said contact interface” and “a plurality of contacts having contact sections and solder tail sections, said contact sections located within said interior cavity, said solder tail sections extending exterior to said contact interface for surface mounting to a circuit board, wherein said solder tails abut said alignment rib and are preloaded against said alignment rib to flex a portion of said contacts against said alignment rib as said contacts are installed into said housing, thereby ensuring coplanarity of said solder tail sections for surface mounting to the circuit board, when said contacts are installed into said housing, said solder tails are positioned between said alignment rib and the circuit board.”

Lin et al. neither describe nor suggest contacts installed into a housing and having solder tails positioned between an alignment rib of the housing and a circuit board. Rather, in contrast to the present invention, Lin et al. describe a connector having a plurality of preformed contacts inserted into vertical alignment channels of an alignment flange, the contacts extend along a vertical surface of the connector and then extend away from the connector along a circuit board. The contacts are not positioned between the circuit board and any portion of the connector.

Moreover, Lin et al. neither describe nor suggest contacts having solder tails abutting an alignment rib and preloaded against the alignment rib to flex a portion of the contacts against the alignment rib as the contacts are installed into the housing, thereby ensuring coplanarity of the solder tail sections for surface mounting to the circuit board. Rather, in contrast to the present invention, Lin et al. describe a connector having a plurality of preformed contacts inserted into vertical alignment channels of an alignment flange. Lin et al. neither describe nor suggest that the contacts are preloaded against the alignment flange to flex a portion of the contacts against the alignment flange. Moreover, the connector described by Lin et al. requires an alignment spacer having a plurality of downwardly extending alignment ribs to be positioned into the alignment channels to abut the contacts and wedge the contacts between the base of the channels and the alignment ribs, thus urging the surface contact sections of the contacts against the corresponding circuit contacts of the PCB. Thus, to the extent that the Lin et al. contacts are flexed or biased, they are flexed or biased by the alignment spacer and not the flange.

Accordingly, for at least the reasons set forth above, claim 11 is submitted to be patentable over Lin et al.

Claims 12-14 depend from independent claim 11. When the recitations of claims 12-14 are considered in combination with the recitations of claim 11, Applicants submit that dependent claims 12-14 likewise are patentable over Lin et al.

Claim 16 recites a method of assembling a surface mount header assembly, the assembly including an insulative housing including a plurality of walls defining an interior surface, an exterior surface and a plurality of contact apertures extending therebetween, the housing further including an alignment rib extending on the exterior surface, the assembly further including a plurality of electrical contacts, wherein the method includes “inserting the contacts through the contact apertures”, “flexing a portion of the contacts against the alignment rib as the contacts are inserted, thereby preloading the contacts against the alignment rib in a coplanar relationship with one another for surface mounting to a circuit board” and “orienting the alignment rib with a mounting surface of the circuit board such that the contacts are positioned between the alignment rib and the mounting surface.”

Lin et al. neither describe nor suggest flexing a portion of electrical contacts against an alignment rib as the contacts are inserted, thereby preloading the contacts against the alignment rib in a coplanar relationship with one another along a mounting surface of a circuit board for surface mounting to the circuit board as recited in claim 16. More specifically, Lin et al. neither describe nor suggest flexing a portion of electrical contacts against an alignment rib. Rather, in contrast to the present invention, Lin et al. describe a connector having a plurality of preformed contacts inserted into vertical alignment channels of an alignment flange.

Moreover, Lin et al. neither describe nor suggest orienting an alignment rib with a mounting surface of the circuit board such that contacts are positioned between the alignment rib and the mounting surface. Rather, Lin et al. describe a connector having a plurality of preformed contacts inserted into vertical alignment channels of an alignment flange, the contacts extend along a vertical surface of the connector and then extend away from the connector along a circuit board. The contacts are not positioned between the circuit board and any portion of the connector.

Accordingly, for at least the reasons set forth above, claim 16 is submitted to be patentable over Lin et al.

Claims 17-19 depend from independent claim 16. When the recitations of claims 17-19 are considered in combination with the recitations of claim 16, Applicants submit that dependent claims 17-19 likewise are patentable over Lin et al.

Claim 20 recites a header assembly including “an insulative housing having a mounting face and comprising an alignment rib extending along the mounting face and having a planar alignment edge along the mounting face” and “a plurality of contacts positioned relative to said housing, such that a mounting portion of each of said contacts is positioned between the mounting face and a circuit board, and such that a mounting portion of each of said contacts abuts said alignment edge thereby ensuring coplanarity of said contacts along the mounting face.”

Lin et al. neither describe nor suggest an insulative housing having a mounting face and an alignment rib extending along the mounting face and having a planar alignment edge along the mounting face as recited in claim 20. Moreover, Lin et al. neither describe nor suggest contacts having a mounting portion positioned between a mounting face of a housing and a circuit board. Furthermore, Lin et al. neither describe nor suggest contacts having a mounting portion abutting the alignment edge thereby ensuring coplanarity of the contacts along the mounting face. Rather, in contrast to the present invention, Lin et al. describe a connector having a plurality of preformed contacts inserted into vertical alignment channels of an alignment flange, the contacts extend along a vertical surface of the connector and then extend away from the connector along a circuit board. The contacts are not positioned between the circuit board and any portion of the connector. Notably, the vertical alignment channels described by Lin et al. do not extend along a mounting face of the connector.

Accordingly, for at least the reasons set forth above, claim 20 is submitted to be patentable over Lin et al.

Claim 21 depends from independent claim 20. When the recitations of claim 21 are considered in combination with the recitations of claim 20, Applicants submit that dependent claim 21 likewise is patentable over Lin et al.

For the reasons set forth above, Applicants respectfully request that the Section 102 rejection of claims 1-9, 11-14, and 16-21 be withdrawn.

The rejection of claims 10 and 15 under 35 U.S.C. § 103 as being unpatentable over Lin et al. is respectfully traversed.

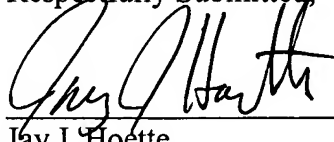
Claim 10 depends from independent claim 1. For at least the reasons set forth above, claim 1 is submitted to be patentable over Lin et al. When the recitations of claim 10 are considered in combination with the recitations of claim 1, Applicants submit that dependent claim 10 likewise is patentable over Lin et al.

Claim 15 depends from independent claim 11. For at least the reasons set forth above, claim 11 is submitted to be patentable over Lin et al. When the recitations of claim 15 are

considered in combination with the recitations of claim 11, Applicants submit that dependent claim 15 likewise is patentable over Lin et al.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Jay J. Hoette", is written over a horizontal line.

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